

**Ras (D2C1) Rabbit mAb**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

<b>Applications:</b> W, W-S	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 21	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P01116	<b>Entrez-Gene Id:</b> 3845
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**Product Usage Information****Application**

Western Blotting  
Simple Western™

**Dilution**

1:1000  
1:50 - 1:250

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

Ras (D2C1) Rabbit mAb recognizes endogenous levels of total Ras protein, specifically K-Ras and N-Ras. This antibody does not cross-react with H-Ras or R-Ras.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a recombinant protein specific to human K-Ras protein.

**Background**

The 21 kDa guanine-nucleotide binding proteins (K-Ras, H-Ras, and N-Ras) cycle between active (GTP-bound) and inactive (GDP-bound) forms (1). Receptor tyrosine kinases and G protein-coupled receptors activate Ras, which then stimulates the Raf-MEK-MAPK pathway (2-4). GTPase-activating proteins (GAPs) normally facilitate the inactivation of Ras. However, research studies have shown that in 30% of human tumors, point mutations in Ras prevent the GAP-mediated inhibition of this pathway (5). The most common oncogenic Ras mutation found in tumors is Gly12 to Asp12 (G12D), which prevents Ras inactivation, possibly by increasing the overall rigidity of the protein (5,6).

**Background References**

1. Boguski, M.S. and McCormick, F. (1993) *Nature* 366, 643-54.
2. Avruch, J. et al. (1994) *Trends Biochem Sci* 19, 279-83.
3. Buday, L. and Downward, J. (1993) *Cell* 73, 611-20.
4. Huang, D.C. et al. (1993) *Mol Cell Biol* 13, 2420-31.
5. Bos, J.L. (1989) *Cancer Res* 49, 4682-9.
6. Ma, J. and Karplus, M. (1997) *J Mol Biol* 274, 114-31.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting **W-S:** Simple Western™

**Cross-Reactivity Key**

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

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